CO-OP MINING COMPANY

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22 May 1994

Pamela Grubaugh-Littig
Permit Supervisor
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3 Triad Center, Suite 350
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Ms. Grubaugh-Littig,

Ref: **Tank Seam Permitting, Co-Op Mining Company, Bear Canyon Mine, ACT/015/025-93B, Emery County, Utah**

Attached are three copies of proposed revisions to the Tank Seam Permit package. Modifications have ben completed to address the issues noted by the Division Staff in the Deficiency letter received this month (May) and during discussions held directly with the staff. The attached list references each of the modifications by page and/or section.

Pages have been marked DRAFT to distinguish them from previously approved pages. If you have any questions, please call Charles Reynolds at (801) 381-2450.

Thank you,

Wendell Owen

Wendell Owen,
Resident Agent

WJO/cr
Enclosure(s)

Co-Op Mining Company
Tank Seam Permit Application

Following is a description of the modification which have been made to the Tank Seam Permit Application. Please incorporate these changes into the current application. These changes have been made to address the deficiencies outlined in the May 5, 1994 deficiency letter.

Page/Plate #	Description
Pg. 3D-7	Discussion added to address issue of prevention of additional moisture on the slopes, as described in the deficiency letter (D.L.), pg. 6, Hydrologic Analysis, Item 8.
Pg. 3F-26 thru 3F-31	Reclaimed Road stability analysis revised to address surface topsoil stability issue and surface scarification & roughening discussed (D.L., pg 2, Soils Analysis, R645-301-242 & 244, pg. 3, Biological Analysis) and also discuss placement of rock fragments (D.L., pg 2, Soils Analysis, R645-301-537)
Pg. 3H-2 thru 3H-10	Discussion of road construction revised. Description of care to be taken to prevent material migration (D.L., pg 6, Engineering Analysis, Item 1). Discussion also added for temporary treatment of runoff with berms & silt fences to be established ahead of disturbance (D.L., pg 6, Hydrologic Analysis, Item 11). Discussion for large rock handling during construction (D.L., pg. 3, Soils Analysis, R645-301-535) and alternate constructed configuration (D.L., pg. 3, Soils Analysis, R645-301-537). Commitment added to maintain erosion control matting on constructed slopes (D.L., pg. 4, Hydrologic Analysis, "BTCA Plans"). Additional discussion added to describe compliance with the recommendations of the constructed slope stability analysis. Existing bond demonstrates the maximum volumes which are to be encountered (D.L., pg 7, Engineering Analysis, Item 4), which covers alternate potential configurations. As-built volumes may result in a reduction in the required bond estimate after construction is complete.

Pg. 3H-11 thru 3H-12	Clarification of cut and fill, Table 3H-1, added (D.L., pg. 6, Engineering Analysis, Item 2).
Pg. 3H-13 thru 3H-43	Page numbers revised for Appendix 3H.
Pg. 3H-44 thru 3H-52	Constructed road stability annalysis revised to clarify soil depth and discuss potential rock storage area (D.L., pg. 3, Soils Analysis, para. 2).
Pg. 3M-2 thru 3M-5	Discussion added to blasting plan to meet requirements of R645-301-554.500 (D.L., pg. 7, Engineering Analysis, item 3).
Pg. 7-89 & 7-89A	Table 7.2-11 revised to show actual culvert outlet conditions (D.L., pg. 5, Hydrologic Analysis, para. 2).
Pg. 7-104A & 7-104B	Discussion of culvert outlet designs added (D.L., pg. 5, Hydrologic Analysis, para. 2) and reference added to pre-mining channel documentation (D.L., pg. 6, Hydrologic Analysis, item 12), and culvert C-12D outlet clarified (D.L., pg. 6, Hydrologic Analysis, item 9).
Pg. 7-122 & 7-123	Discussion of post-mining drainage channels RC-TS1 thru RC-TS6 added (D.L., pg. 5, Hydrologic Analysis, Para. 2, Reclaimed Drainages).
Pg. 7G-24A & B, 7G-38C thru 7G-38L, 7G-45F	Culvert outlet designs clarified and stable portions of undisturbed channels proposed for outlet (D.L., pg. 5, Hydrologic Analysis, para. 2, Item 9).
Pg. 7H-15	RC-TS1 thru RC-TS6 post-mining channel designs (D.L., pg. 6, Hydrologic Analysis, item 8).
Pg. 7H-52 thru 7H-77	Documentation of pre-mining channels to be disturbed and discussion of proposed restoration for post-mining conditions added (D.L., Hydrologic Analysis, pg. 4, Reclaimed Drainages, pg. 5, item 3, item 4, item 5, item 6, item 7, item 8, item 12).

Pg. 7K-8 thru 7K-14	BTCA area descriptions revised to discuss committment to maintain erosion control matting (D.L., Hydrologic Analysis, pg. 4, BTCA Plans, pg. 5, item 1), description of Culvert C-12D and treatment for surrounding areas clarrified (D.L., pg. 6, Hydrologic Analysis, item 9) and drainage to prevent water from saturating slopes (D.L., pg. 6, Hydrologic Analysis, Item 10).
Pg. 8-37 & 8-42	Topsoil Storage discussion revised for the addition of a second storage pile to increase pile slope stability (D.L., pg. 2, Soils Analysis, para. 3, R645-301-244).
Plate 2-4C	Second topsoil stockpile added on upper storage pad (D.L., pg. 2, Soils Analysis, para. 3, R645-301-244).
Plate 2-4E	Topsoil stockpile contours revised to a 1.5H:1V slope (D.L., pg. 2, Soils Analysis, para. 3, R645-301-244). Disturbed area boundary extended to include culvert outlets placed in natural drainage channel at stable points (D.L., pg. 5, Hydrologic Analysis, para 2). Culvert C-12D outlet clarified (D.L., pg. 6, Hydrologic Analysis, item 9).
Plate 3-2E	Reclaimed contours revised to eliminate near vertical features shown within constructed cut areas (D.L., pg. 3, Soils Analysis, R645-301-553). Vertical features within constructed fill areas will not be disturbed during construction and will be reestablished during reclamation excavation.
Plate 7-1C	Second topsoil stockpile added on upper storage pad (D.L., pg. 2, Soils Analysis, para. 3, R645-301-244).
Plate 7-1E	Topsoil stockpile contours revised to a 1.5H:1V slope (D.L., pg. 2, Soils Analysis, para. 3, R645-301-244). Disturbed area boundary extended to include culvert outlets placed in natural drainage channel at stable points (D.L., pg. 5, Hydrologic Analysis, para 2). Culvert C-12D outlet clarified (D.L., pg. 6, Hydrologic Analysis, item 9).
Plate 7-5	Topsoil stockpile contours revised to a 1.5H:1V slope (D.L., pg. 2, Soils Analysis, para. 3, R645-301-244).

Plate 7-7	Channels RC-TS1 thru RC-TS6 labeled (D.L., Hydrologic Analysis, pg. 4, Reclaimed Drainages, pg. 5, item 7).
Plate 7-8A	Removed.
Plate 7-8C	Profiles added for RC-TS1 thru RC-TS6 (D.L., Hydrologic Analysis, pg. 4, Reclaimed Drainages, pg. 5, item 3, item 4, item 5, item 6, item 7, item 8, item 12).
Plate 8-1	Topsoil stockpile contours revised to a 1.5H:1V slope (D.L., pg. 2, Soils Analysis, para. 3, R645-301-244).
Plate 8-5C	Second topsoil stockpile added on upper storage pad (D.L., pg. 2, Soils Analysis, para. 3, R645-301-244).
Plate 8-5E	Topsoil stockpile contours revised to a 1.5H:1V slope (D.L., pg. 2, Soils Analysis, para. 3, R645-301-244). Disturbed area boundary extended to include culvert outlets placed in natural drainage channel at stable points (D.L., pg. 5, Hydrologic Analysis, para 2).
Plate 8-6	Second topsoil stockpile added and topsoil stockpile contours revised to a 1.5H:1V slope (D.L., pg. 2, Soils Analysis, para. 3, R645-301-244).